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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/934,339	08/21/2001	Tajinder Manku	119.7-US-U1	7876

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EXAMINER

HAM, SEUNGSOOK

ART UNIT PAPER NUMBER

2817

DATE MAILED: 02/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/934,339	Applicant(s) MANKU ET AL.	
	Examiner Seungsook Ham	Art Unit 2817	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on 16 December 2002.

2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) 1-12 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

6) ☒ Claim(s) 1-12 is/are rejected.

7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All   b) ☐ Some \*   c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6) <input type="checkbox"/> Other: _____
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## **DETAILED ACTION**

### ***Response to Amendment***

The declaration under 37 CFR 1.132 filed on 12/16/02 is insufficient to overcome the rejection of claims 1 and 5-10 based upon 35 USC 103 as set forth in the last Office action because: Ray et al. is qualify as a prior art under 35 USC 102(b)/103 which is published more than one year prior to the date of application for patent in the United States. Thus, declaration under 37 CFR 1.132 cannot be used to overcome the 102(b)/103 reference.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 11 and 12 are vague and indefinite as to how "a computer readable memory medium" and "a computer software code" is structurally related to the filter structure recited in the body of claim. It appears that the body of claim recites a physical filter structure ("an integrated RF filter...comprising"), thus, it is unclear how a computer readable memory medium and a computer software code can contain a physical filter structure. Claim 12 also has the same indefiniteness.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grundmann ('796) or Pawley ('966) in view of Miya et al. ('087) or Ray et al. ("A Highly Linear Bipolar 1V Folded Cascode 1.9 GHz Low Noise Amplifier").

Grundmann (fig. 1) an RF filter 21 comprising: first and second capacitors 23, 24 connected in series between an input and an output, an inductor 22 connected in parallel to the series connected capacitors, and a shunt resistor 26 connected between ground and the common side of the first and second capacitors.

Regarding to claims 3 and 4, the shunt resistor 26 is selected to be equal in magnitude to the impedance of the inductor and capacitors at its resonant frequency (see page 2).

Pawley (fig. 4) also discloses an RF filter 26 comprising: first and second capacitors 14, 15 connected in series between an input and an output, an inductor 12 connected in parallel to the series connected capacitors, and a shunt resistor 16 connected between ground and the common side of the first and second capacitors.

Regarding to claims 3 and 4, the shunt resistor 16 is selected to be equal in magnitude to the impedance of the inductor and capacitors at its resonant frequency (see columns 6 and 7).

Both Grundmann and Pawley do not show the RF filter forms an integrated circuit. However, it is well known in the art to form an RF filter in an integrated circuit for a compact design and to increase the operating filter frequency.

Miya et al. (col. 1) teaches forming an integrated RF filter using inductors and capacitors formed into an IC circuit for miniaturization (see col. 4, lines 33-65, and col. 1, lines 25-30).

Ray et al. also teaches an integrated RF trap filter to obtain low power consumption and operate in a high microwave frequency. Ray et al. also discloses the integrated filter using silicon bipolar technology (p. 157).

Therefore, it would have been obvious to one of ordinary skill in the art to form the RF filter in an integrated circuit in the device of Grundmann or Pawley to reduce the size of the filter and operate in a high microwave frequency range since such technique is well known in the art as shown by Miya et al. (see also col. 2, line 44 – col. 3, line 33) or Ray et al.

Obtaining a computer software code for the filter of Grundmann or Pawley is considered as an obvious modification since applicant failed to disclose the criticality of such software code.

In response to applicant's argument that "Grundmann or Pawley patents are so remote an area of technology (vacuum tubes and discrete technology), that they would not be expected to be applicable in the area of integrated RF technology", the examiner respectfully disagrees.

It is well known in the electronic circuit technology that integrated circuit technology is used to reduce the size of circuit devices (such as vacuum tubes or discrete devices) by placing separate electrical circuit elements in a single substrate (see Millman reference below). Miya et al. (col. 1, lines 25-30) and Ray et al. also teach the IC technology for miniaturization. Moreover, it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893), *In re Larson*, 144 USPQ 347 (1965). Thus, it is the examiner's opinion that one of ordinary skill in the art would use IC technology to form the RF filter of Grundmann or Pawley to reduce the size of the filter and also increase the operating frequency range.

Furthermore, applicant's argument that applicant's invention offers a high-Q circuit using low-Q integrated components (see REMARKS, P. 11) cannot be given any patentable weight since such language is not in the claims.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Millman teaches the advantages of integrated circuit technology.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seungsook Ham whose telephone number is (703) 308-4090. The examiner can normally be reached on Monday - Thursday from 8:00 A.M. to 5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on (703)308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

A handwritten signature in black ink, appearing to be 'S. Ham', with a long horizontal line extending to the right.

Seungsook Ham  
Primary Examiner  
Art Unit 2817

sh  
February 6, 2003